

# A MOTOR OF ROTOR WITH BUILT-IN PERMANENT MAGNET

## ABSTRACT

5 The present invention is a motor of rotor with built-in permanent  
magnet, which comprises an annular stator and a rotor. The annular stator is  
set a cylindrical capacity with suitable diameter; the rotor is set in the  
cylindrical capacity, and an air gap is between a circumference surface of  
cylindrical capacity and rotor. Rotor further includes a rotor core, and a  
plurality of openings are formed surrounding the rotor core. Each opening is  
10 with two parallel surfaces, a top surface and a bottom surface, and each of  
them is a flat plate figure. The top surface is adjacent to a contour of rotor  
core, and extends along the circumference contour forming a side surface  
which substantially parallel to the contour. A suitable distance is between  
the side surface and circumference contour, and any two adjacent surfaces  
15 are with a channel of suitable width. A plurality of permanent magnets are  
arranged in openings by way of interlaced magnetic poles, and the shape of  
permanent magnet is matched with the shape of the opening.